

# ROTEL *hi-fi*

## RT 935AX

AM/FM Stereo Tuner

## Owners Manual

Please write the serial number and the purchase date of this RT 935AX for your records in the space provided.

Serial Number \_\_\_\_\_.

Purchase Date \_\_\_\_\_.

## A WORD FROM ALL OF US AT ROTEL

We thank you for purchasing our RT 935AX AM/FM Stereo Tuner. We have been designing and manufacturing high quality, high performance audio electronics for more than 30 years. This tuner was designed to offer lifelike sound and is a natural extension of our love of music. Our passion for good sound and our love of music is well known. We believe that the music received from our RT 935AX tuner will be a source of pleasure to you for years to come.

Rotel is committed to making quality products to enhance your life. We have designed this tuner to be durable, easy to operate and to have *high fidelity to the original signal broadcast and the music*. Please read the owners manual to ensure that the tuner is installed properly and capable of offering optimum performance. We appreciate being a part of your life.

## INSTALLATION OF THE RT 935AX

Please place the tuner on a **DRY**, level surface away from direct sunlight. Avoid placing the tuner where it will become wet as this will damage the circuits inside. The tuner should be mounted where it will not be subject to high humidity or vibration.

We recommend installing the RT 935AX in furniture designed to house Hi Fi components. This will allow the tuner to be mounted on a shelf of its own. Stacking the tuner on top of an amplifier will subject it to possible high heat and *is not recommended*. Placing it on a separate shelf will also minimize the potential from interference created by other components, particularly CD players. Component furniture will also reduce or suppress vibration and *all audio components will provide improved sound when free from vibration*. Ask your **ROTEL hi fi AUTHORIZED DEALER** for advice about component furniture and proper installation of audio components.

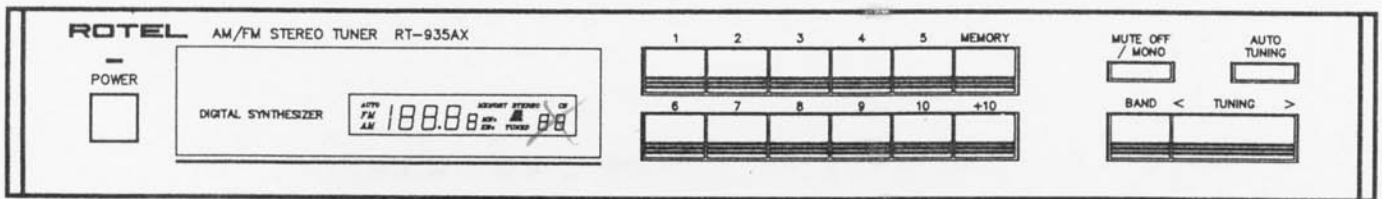
## ELECTRICAL REQUIREMENTS

This tuner is designed to operate on AC voltage and the correct voltage is displayed on the Back Panel. **Do not attempt to operate the tuner with incorrect voltage as this will damage the circuitry and will also void your warranty.** If you are in doubt about the correct voltage for this tuner we suggest that you please read the label on the back panel or consult your **ROTEL hi fi AUTHORIZED DEALER** for confirmation of the correct voltage.

There are **NO** user serviceable parts inside the RT 935AX. **Please do not open the cabinet as this will expose you to the risk of potentially dangerous high voltage and the risk of shock.** This could also damage the circuits inside the tuner and possibly void your warranty.

Connect the Power Cord to the AC wall outlet for power. When you wish to disconnect the power cord from the wall socket, always hold the plug firmly and pull on the plug to remove it from the outlet. *Do not unplug the power cord from the wall outlet by pulling on the cord only. This may damage the power cord and create a hazardous condition.* We recommend that the tuner be connected to the mains wall socket, not an extension cord.

If you wish to clean the cabinet of the RT 935AX we suggest that you clean it with a soft, DRY cloth. *Never use cleaning compounds or solvents to clean the cabinet as they may damage the finish or remove the labels.* They could also damage the circuits if they leak into the tuner.



Please refer to this drawing of the Front Panel when reading the section about Controls and the Display on the RT 935AX.

## CONTROLS ON THIS AM/FM STEREO TUNER

The controls on the RT 935AX are easy to operate. We are known to favor simple design and this tuner reflects that ideal while providing the necessary controls.

Push the **POWER** button once, the POWER indicator will light and the Tuner will come **ON**. Approximately 2 seconds later the **Frequency Display** will illuminate, this delay is normal. Push the POWER button again and the Display will go off, and the Tuner will be in OFF position.

Inside the Display are the indicator lights for the **AUTO** tune function, the **AM** and **FM** band indicator, the **FREQUENCY** display in **MHz** (FM) or **kHz** (AM), **MEMORY**, **STEREO**, **TUNED** and the station preset **CH(ANNEL)** number expressed as digits.

The **TUNED** indicator light to inform you of the relative signal strength being received. The **STEREO** indicator light to inform you a stereo signal is properly received.

We have the **Station Preset** buttons mounted to the right of the Display and they will recall stations for FM or AM after you have programmed your favorite stations into the **MEMORY**. The RT 935AX will remember up to 20 preset stations, for the difference **AM Band** and **FM Band**. To tune a station higher than 10 will require you to push the **10+** button at the same time as pushing the button for the remainder of the total station number. *For example; if you wish to tune in station 16 on the tuner then you should push the 10+ button and the 6 button at the same time. This is also the manner in which the MEMORY button will function.* Press the **MEMORY** button and the MEMORY indicator light will illuminate in the Display. Then press the station preset number you wish to assign to the station you are tuned to at the present. After 5 seconds the MEMORY function will defeat itself if you have not entered a number.

The **MUTE OFF/MONO** button will switch the RT 935AX from STEREO mode to MONO mode and will also defeat the MUTE circuit at the same time. This will allow you to receive signals too weak to overcome the MUTE circuit due to very low signal levels. Muting is designed to remove the annoying hiss between stations and the pop sounds as you tune in a station.

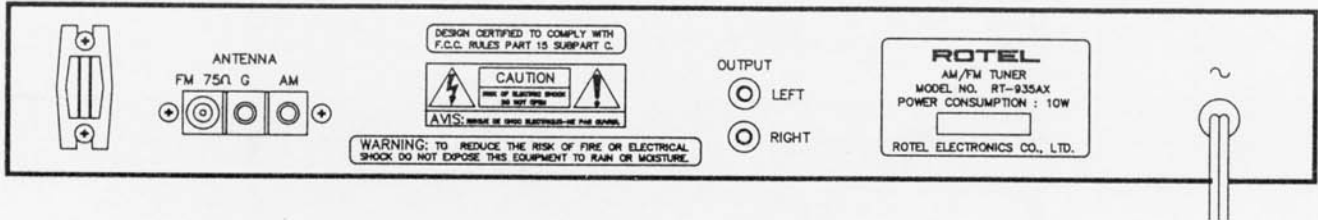
**NOTE:** The tuner will be in MONO when you turn the Power On *the first time*. Push the Mute Off button once to set the tuner to **Stereo** operation during initial installation. This setting will be remembered if the power is interrupted for a period up to a week or so.

The **AUTO TUNING** button will allow the RT 935AX to seek the next station *up or down* the band from the current station you have tuned in. Press the AUTO TUNING button and the **AUTO** indicator light will illuminate in the Display. When a station is properly received the

**TUNED** indicator light will come on in the Display. To defeat this function press the **AUTO TUNING** button again and the **AUTO** light will go out.

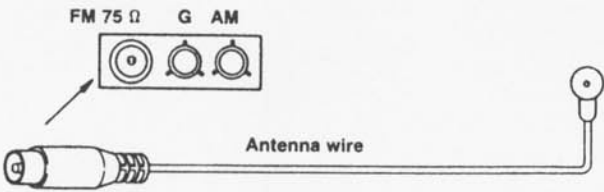
The **BAND** button will change the tuner between **AM** and **FM** bands. The Display will show **kHz** and **AM** when the tuner is set for operation on the **AM** band. It will display **MHz** and **FM** when set to the **FM** band.

The **TUNING** button will permit you to start the tuner seeking the next station up or down the band if you are in the **AUTO TUNING** mode or it will allow you to manually tune to a specific frequency *when AUTO TUNING is defeated*. Push the right side of the **TUNING** button to tune higher frequencies up the band. Push the left side of the button to tune lower frequencies down the band.

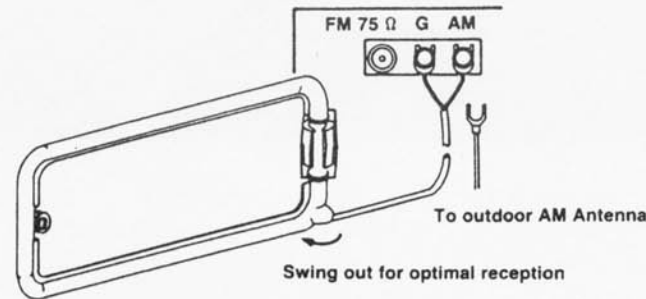


Please refer to this drawing of the Rear Panel when reading the section regarding the Antenna connection and connection to your stereo integrated amplifier or preamplifier.

• **INDOOR FM ANTENNA (Included)**

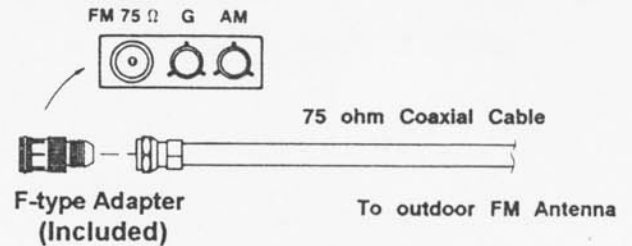


• **AM ANTENNA (Included)**

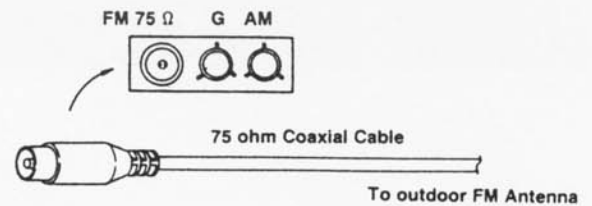


• **OUTDOOR FM ANTENNA**

(Applicable for U.S.A., Canada or where approved to the usage)



(Applicable for European version)



Please refer to this drawing of the indoor / outdoor FM Antenna and AM Antenna connection.

## CONNECTING THE RT 935AX TO YOUR STEREO SYSTEM

The Rear Panel of the RT 935AX has the connections for the **AM** and the **FM ANTENNAE'S** and also has the **RCA OUTPUT** connections to connect the tuner to your stereo system. We include a small FM antenna and an AM antenna with the RT 935AX. *We strongly recommend the use of an outdoor antenna if this is possible as it will greatly improve reception. Ask your ROTEL hi fi AUTHORIZED DEALER for advice about external antennae's.*

The included FM antenna should be extended and then positioned for best reception. **Small differences in location of the antenna can make a significant difference in the reception of FM signals.** Please experiment with the placement to ensure the best reception of FM stations.

The AM antenna should be mounted for best reception and also the location should be chosen to minimize noise reception. Noise is inherent in the AM band, unfortunately, and is one of the reasons for the popularity of the FM radio band.

The **OUTPUT** connections should be connected to the Tuner input on your integrated amplifier, preamplifier or Surround Sound Processor. Be certain to ensure that the Left (L) and Right (R) channels are connected correctly. The sound may be improved by substituting high quality RCA patch cables for the ones supplied with the tuner. Auditioning various cables is recommended.

## A FINAL WORD FROM ROTEL ABOUT THIS TUNER

We have designed this tuner to measure well with test instruments and with the human ear. We feel that both test methods are useful in the design of audio electronics. *This is time consuming but we feel that the music benefits from this care and attention to detail.*

We realize that there are many choices available in the market today and we thank you again for choosing our RT 935AX Tuner to receive music from your favorite radio stations. *Enjoy the music!*

## SPECIFICATIONS

### RT 935AX AM/FM STEREO TUNER

#### FM SECTION (75 ohm antenna)

Usable Sensitivity	12.5 dBf / 1.2 $\mu$ V (75 ohms)
50 dB Quieting Sensitivity	
Mono	11 dBf / 2 $\mu$ V (75 ohms)
Stereo	34.5 dBf / 30 $\mu$ V (75 ohms)
Signal to Noise ratio (@ 65 dBf)	
Mono	75 dB
Stereo	70 dB
Harmonic Distortion (@ 65 dBf, 1 kHz)	
Mono	0.08%
Stereo	0.3%
Frequency response	30 Hz-15,000 Hz $\pm$ 1.5 dB
Stereo separation (100 Hz / 1 kHz / 10 kHz)	35 dB / 40 dB / 30 dB
Output level	630 mV
Sub carrier product ratio	60 dB
Alternate channel selectivity ( $\pm$ 400 kHz)	63 dB
Capture ratio	1.5 dB
Spurious response ratio	95 dB
Image response ratio	65 dB
IF response ratio	90 dB
AM suppression ratio	60 dB
Antenna input impedance	75 ohm

#### AM SECTION (Loop antenna)

Usable Sensitivity	350 $\mu$ V / m
Selectivity	27 dB
Signal to Noise ratio	60 dB
Image response ratio	40 dB
IF response ratio	40 dB
Power requirement	115 volts AC 50/60 Hz 230 volts AC 50/60 Hz
Power consumption	10 watts
Weight	3.6 kg / 7.9 lbs
Dimensions	440 (w) x 72 (h) x 284 (d) mm 17-3/8" (w) x 2-7/8" (h) x 11-1/4" (d)

All specifications are correct at the time of printing. Rotel reserves the right to make improvements without notice.